Writing "no-CPR" orders: Must resuscitation always be offered?

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Résumé : La réanimation cardio-respiratoire (RCR) est obligatoire pour tous les patients victimes d'un arrêt cardiaque en contexte de soins de courte durée, sauf si le patient refuse l'intervention. Or, des renseignements récents ont permis aux médecins d'identifier les patients pour lesquels la RCR est rarement bénéfique. L'auteur discute du concept de la «futilité» de la réanimation dans une telle situation. Il conclut que rares sont les cas où la RCR est futile au sens absolu. Il ne faudrait pas justifier par la futilité l'omission de parler ouvertement de la réanimation avec les patients, leur mandataire, ou les deux. Les médecins devraient discuter de la RCR avec leurs patients dans le cadre du plan de soins; cependant, il n'est pas nécessaire d'offrir l'intervention dans le cadre du plan de traitement de tous les patients.

Cardiopulmonary resuscitation (CPR) was introduced 30 years ago as an emergency treatment for cardiac or respiratory arrest due to "drowning, electrical shock, untoward effect of drugs, anesthetic accident, heart block, acute myocardial infarction or surgery."[1] Refinements in the use of this procedure have had major benefits for many patients; CPR is now mandatory in cases of cardiac arrest in acute care settings unless refused by the patient. However, the use of CPR in certain patients often fails to return cardiac and respiratory function or results in harm to the patient and a reduced quality of life. These undesirable outcomes are frequent when CPR is provided to patients with terminal and irreversible illnesses.

Buckman and I[2] have discussed the need for conversations about CPR with patients and expressed the opinion that if the patient is "dying," as defined by certain criteria, a different form of conversation should take place in the hope of reducing requests for medically inappropriate CPR.

Case report

An exceptionally fit man 38 years of age had neutropenia; myelodysplasia developed at age 40. He was clinically well until, at age 43, he had pneumonia with a fever and bleeding; he was found to have acute nonlymphocytic leukemia. He was initially given chemotherapy but was later admitted to the intensive care unit and given mechanical ventilation and hemodialysis for acute renal failure. After a month, his blood cell counts returned to normal, and he had a partial remission with a residual myelodysplastic change in the marrow. His renal function returned to normal, and remission maintenance therapy was provided without difficulty. At the age of 46, the patient had a recurrence of acute leukemia and responded to chemotherapy with partial remission. Bone marrow transplantation was not considered a reasonable option at the time. The patient remained strong and reasonably well for 1 year.

At 47, he had another relapse with bleeding and infection; discussion with the patient and his family indicated a continuing wish for therapy. The patient was given oral chemotherapy. A pharyngeal and neck mass developed, likely in relation to leukemic infiltration in that area. The physicians recommended palliative care and "no CPR" in extensive conversations with the patient and his family. The patient was reluctant to accept a "no-CPR" order, although his family and close friends did not want him to be treated aggressively. After the patient had spent 4 weeks in hospital, in spite of oral chemotherapy, treatment with antibiotics and a blood transfusion, pneumonia developed, and he became con-

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fused. Further treatment of the infection was not helpful; the patient became comatose. At the request of the patient's wife and family a "no-CPR" order was written. The patient died the next day.

Was it correct not to respect the wishes of this terminally and irreversibly ill patient in regard to CPR? Should the "no-CPR" order have been written, in accordance with medical advice and the wishes of the patient's family? Was it defensible to write a "no-CPR" order with the permission of the family after the patient lost consciousness? Was there a better way to conduct the "no-CPR" conversations with the patient and his family?

Recent developments

A fresh look at discussing "no-CPR" orders with patients is timely because of recent scientific and conceptual developments, including results of studies of the effectiveness of CPR, increased respect for patient autonomy, improved understanding of futility, and changing patient, professional and social views on limiting therapy.

The effectiveness of CPR in restoring cardiac and respiratory function is exemplary in patients with many conditions, but it is markedly limited in patients in other circumstances.[2-6] In particular, CPR almost always fails to restore cardiorespiratory function in patients with terminal metastatic cancer or multiple advanced organ disorders, or in older, frail patients with advanced, irreversible illness; these patients are considered to be "dying."[2] CPR is not expected to provide any benefit to a patient in one of these states; there may be a transient return of cardiac function, often associated with residual neurologic and physical disability, but very few of these patients subsequently leave the hospital. Similarly, people who have an unobserved cardiac arrest rarely respond to CPR: cardiac arrest in a chronic care setting is sometimes regarded as a contraindication to resuscitation.[7] In these circumstances it would be medically inadvisable to perform CPR; to do so would be to pursue life regardless of subsequent disability or the lack of patient response.

Respect for patient autonomy, particularly in making decisions regarding medical treatment, has become a prominent topic in bioethics. The right of patients to refuse any form of medical therapy is now enshrined in law,[8] and patient requests for particular treatments are carefully considered. Because of the power imbalance inherent in the patient–physician relationship[9] patients should receive complete and courteous responses to their questions. Information about CPR, its benefits or harms and the patient's expected quality of life after the procedure should be given to the patient. Physicians should abide by the requests of a well-informed patient as a sign of respect for his or her autonomy.[10] According to a recent study, most patients over 60 years of age appreciate a prognosis and prefer a "no-CPR" order if the clinician estimates that the probability of survival is slim.[11] However, some patients' choices seem inappropriate and may cause harm to themselves or others. Is a harmful treatment in keeping with respect for the person and the community?

The understanding of "futility" as a reason for limiting therapy has grown significantly in the past decade.[12,13] Medical treatment is considered futile when the proposed treatment cannot produce the expected benefit.[14] An example is liver transplantation for disseminated cancer; this procedure has no chance of treating the condition effectively and would, therefore, be denied. However, most patients with cardiac arrest will respond, at least transiently, to CPR, and, therefore, this treatment is not absolutely futile. For this reason, the values and wishes of the patient play a major part in most decisions based on futility of treatment. Such decisions are usually reached through agreement between appropriately informed patients and physicians with expert judgement, unless absolute futility comes to bear.

Various professional statements have dealt generally or specifically with the use of CPR. The CMA Code of Ethics states that "an ethical physician will recognize that a patient has the right to accept or reject . . . any medical care recommended."[15] It also asserts that "an ethical physician will recommend only . . . therapy that is believed necessary for the well-being of the patient. The physician will recognize a responsibility in advising the patient of findings and recommendations and will exchange such information with the patient as is necessary for the patient to reach a decision." In a joint statement the CMA, Canadian Nurses Association and Canadian Hospital Association declared, "competent patients have the right to make decisions about their treatment."[16] The Council on Ethical and Judicial Affairs of the American Medical Association has pronounced on the use of CPR specifically: a "physician has an obligation to honour the resuscitation preference expressed by a patient," but "in unusual circumstances when efforts are judged by the treating physician to be futile, even if previously requested by the patient, CPR may be withheld."[17] A recent assessment of ethical concerns in CPR also states that the patient's "right to choose does not imply the right to demand care beyond appropriate options based on medical judgment and accepted standards of care."[18] The CMA, with the Canadian Hospital Association and the Catholic Health Association of Canada and with the cooperation of the Canadian Bar Association, has issued a Joint Statement on Resuscitative Interventions, which provides up-to-date guidelines for Canadian health care professionals. (The statement appears on pages 1176A to 1176C of this issue and an article about its development appears on pages 1182 to 1183.)

These statements recognize the need to respect the patient's choices and to ensure his or her health. In terms of the decision to administer CPR these two aims are

usually consonant. However, although these statements support the patient's right to refuse CPR, they fail to indicate clearly whether patient requests for medically inappropriate CPR should be honoured.

Social concerns are also relevant to providing appropriate treatment. The Canada Health Act[19] does not give a clear definition of "medical necessity."[18] In addition, because of the high costs of health care, there is strong political motivation to promote cost-containment and cost-effectiveness. As a result, health care professionals are being asked to justify the use of various treatments. In this context, CPR is a frequently used and, therefore, costly treatment that merits examination. Unjustifiable use of CPR is harmful not only to the patient but also to the health care system. On the other hand, there is a reluctance to limit the use of CPR if a patient has requested it.

Recent advances in our understanding of medical futility and of the effectiveness of CPR, increased respect for patient autonomy, and professional and social considerations indicate the need for a fresh approach to "no-CPR" orders.

Proposed content of conversations about CPR

In light of the changing technical, medical, ethical and social views, the content of patient–physician conversations about CPR may be altered in order to achieve the appropriate, beneficial and medically necessary use of this treatment. The following principles should be incorporated into such conversations.

First, the physician and patient should recognize the limitations of CPR. Knowledge about the technical effectiveness of the procedure is a matter of professional expertise. If the physician knows that CPR is technically ineffective in an absolute sense for a particular patient, he or she should give this information to the patient, and CPR should not be offered or provided.[15,17] In many situations CPR is very infrequently effective in returning respiratory and cardiac function to normal; the physician should inform the patient of the relative ineffectiveness of CPR and make a recommendation. However, if the quality of life after the procedure is an important consideration a final decision must be made on the basis of the patient's acceptance of a prospective reduction in lifespan or in quality of life.

Second, the physician should ascertain the patient's life plans and his or her expectation of the result of therapy. Asking the patient about these issues is a sign of respect for his or her values and helps to create trust between patient and physician.

Third, during the conversation about CPR, the physician and patient should formulate a treatment plan that is based on a firm diagnosis and a realistic appraisal of the prognosis and therapy. CPR should be provided in keeping with the total treatment plan.

Fourth, any conversation with patients about CPR must be sensitive and thoughtful, out of respect for the patient. As a part of each such conversation, the physician should provide his or her professional opinion on the usefulness of CPR in the patient's particular situation. This opinion should be based on scientific fact and on knowledge of the patient's values and life plans. CPR should be offered only if it is appropriate, beneficial and medically necessary for the particular patient. Otherwise, CPR should not be offered.

Fifth, since there is a lack of consensus on what constitutes "medical necessity," and since resource use and social equity must be considered in deciding what is medically necessary, inclusion of this concept in discussions about CPR is questionable.[20,21] The entire community, including patients, families and health care professionals should participate in defining the concept clearly.

Sixth, if the patient or his or her surrogate insists on CPR because it would be beneficial in terms of the patient's values and life plans, despite the physician's opinion that it is inappropriate, discussion should continue on several occasions. Trusted advisers to the patient or family may be able to help resolve differences of opinion. Because of the possibility of conflict or disagreement, it is advisable to start discussions about CPR early in the patient's illness rather than close to the time of potential need. The increased use of advance directives for health care[22] may prompt such early conversations.

Conclusion

Although CPR can save the lives of many patients, its use has now expanded to those for whom the likelihood of restoring cardiopulmonary function is remote. The increase in recognition of the technical, medical and scientific limitations of CPR, and in consideration of patient wishes, makes this an appropriate time to reconsider the form and content of patient–physician discussions about CPR. Any sensitive and thoughtful conversation should emphasize joint decision making and mutual respect for the contribution to the decision of each party. During such conversations the physician should disclose all relevant information and offer his or her opinion; the patient or his or her surrogate should provide a thoughtful response. If there is disagreement between these parties, continuing discussions may include interested advisers and other professionals. Such discussions should be started well before the need for CPR arises to allow time to reconcile differences.

Although offering CPR in medically inappropriate situations is not recommended, under present professional and social standards in Canada physicians are not permitted to write "no-CPR" orders without patient agreement. However, early and carefully structured discussions promise to prevent or resolve disagreements. Without such conversations and patient agreement "no-CPR" orders should not be written.

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